

REMARKS

Applicants acknowledge receipt of the Final Office Action mailed November 28, 2005.

In the Final Office Action, the Examiner objected to claim 15; rejected claims 1 and 11 under 35 U.S.C. § 102(b) as being anticipated by “*Admitted Prior Art*” (“*APA*”); and rejected claims 1-12 and 14-16 under 35 U.S.C. § 102(b) as being anticipated by *Rahim* (U.S. Patent No. 6,362,525) (“*Rahim*”).

In this Amendment After Final, Applicants propose amending claims 1-6, 8-12, and 14-16 to more appropriately define the present invention. Upon entry of this Amendment after Final, claims 1-12 and 14-16 will remain pending. Of these claims, claims 1, 9, and 11 are independent. Claim 13 was previously canceled, without prejudice or disclaimer, in the “Amendment” filed September 15, 2005.

The originally-filed specification, claims, abstract, and drawings fully support the amendments to claims 1-6, 8-12, and 14-16. No new matter has been introduced.

Based on the foregoing amendments, Applicants traverse the rejections above and respectfully request reconsideration for at least the reasons that follow.

I. OBJECTION OF CLAIM 15

The Examiner’s objection to claim 15 has been rendered moot in view of the amendments made to claim 15.

II. 35 U.S.C. § 102(b) REJECTION - *APA*

Claims 1 and 11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *APA*. Applicants respectfully disagree with the Examiner’s arguments and conclusions and submit that amended independent claims 1 and 11 patentably distinguish over *APA* at least for the reasons described below.

In order to properly establish that *APA* anticipates Applicants' claimed invention under 35 U.S.C. § 102, each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in that single reference. Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

With respect to Figs. 21A and 21B, *APA* teaches a semiconductor chip 302 flipchip-mounted on a wiring board 301. (*Specification*, p. 2, line 10). Projected electrodes (bumps) 303 are formed on pads of the semiconductor chip 302 for use in flipchip mounting. (*Id.* at p. 2, ll. 11-13). Bypass capacitors 305 are provided near the semiconductor chip 302 to prevent electric current fluctuation. (*Id.* at p. 3, ll. 21-23).

APA, however, does not teach a second (or auxiliary) semiconductor chip, provided on a wiring board, having a semiconductor substrate with a side facing a side of a semiconductor chip, a plurality of passive elements integrated on the semiconductor substrate, and pads for external connection to which both ends of each of the plurality of passive elements are electrically connected, as required by Applicants' claims 1 and 11.

The Examiner alleges that element 305 represents a "second semiconductor chip." (*Office Action*, p. 4, ¶ 5, line 8). Additionally, the Examiner asserts, "Applicant's argument that the passive element(s)...are not [a] semiconductor chip...is not persuasive because passive elements such as capacitors and inductors are well known chips in the art, and they are well known to be formed by various materials, including semiconductor." (*Id.* at p. 2, ¶ 3, ll. 3-6). However, Applicants respectfully submit that bypass capacitor 305 is not a "second [or auxiliary] semiconductor chip...having a semiconductor substrate...having a plurality of passive elements

integrated on said semiconductor substrate,” as required by each of claims 1 and 11. Instead, bypass capacitor 305 is a discrete capacitor having a pair of ends and does not have a plurality of passive elements integrated on a semiconductor substrate. (See *Specification* at p. 4, ll. 6-17).

Accordingly, with respect to independent claim 1, *APA* fails to teach or suggest the claimed combination, including, *inter alia*:

a second semiconductor chip, provided on said wiring board, having a semiconductor substrate with a side facing a side of said semiconductor chip, having a plurality of passive elements integrated on said semiconductor substrate.

Similarly, with respect to claim 11, it is also clear that *APA* does not teach each and every element, including, *inter alia*:

an auxiliary semiconductor chip, provided on said wiring board, having a semiconductor substrate with a side facing a side of said semiconductor chip to be mounted, having a plurality of passive elements integrated on said semiconductor substrate.

The Examiner alleges that element 305 represents an “auxiliary semiconductor chip.” (*Office Action*, p. 5, ¶ 5, line 1). As stated above, Applicants respectfully submit that bypass capacitor 305 is different from the claimed “auxiliary semiconductor chip,” for the reasons explained above with respect to claim 1. Accordingly, *APA* fails to disclose each and every element of independent claim 11.

Since *APA* fails to disclose each and every element of independent claims 1 and 11, *APA* fails to anticipate claims 1 and 11. Applicants therefore request that the rejection of claims 1 and 11 under 35 U.S.C. § 102(b) be withdrawn and claims 1 and 11 be allowed.

III. 35 U.S.C. § 102(b) REJECTION - RAHIM

Claims 1-12 and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Rahim*. Applicants respectfully disagree with the Examiner’s arguments and conclusions and

submit that amended independent claims 1, 9, and 11 patentably distinguish over *Rahim* at least for the reasons described below.

Rahim teaches a circuit structure 94 including an integrated circuit (IC) 90 laterally displaced from an inductor 26, formed within a grid-array substrate 92. (*Rahim*, col. 11, ll. 23-29 and Fig. 9a). Each of the terminals 34 of inductor 26 is connected to one of the IC contact pads 24 within grid-array substrate 92. (*Id.* at col. 11, ll. 29-31). Additionally, *Rahim* discloses contact pads 102 on a low-loss substrate 98 may connect to a passive element formed on the low-loss substrate 98, wherein the passive element may then be connected to inductor 26 and/or IC 90. (*Id.* at col. 11, ll. 60-63 and Fig. 10).

Rahim, however, does not teach a second (or auxiliary) semiconductor chip, provided on a wiring board, having a semiconductor substrate with a side facing a side of a semiconductor chip, a plurality of passive elements integrated on the semiconductor substrate, and pads for external connection to which both ends of the plurality of passive elements are electrically connected, as required by Applicants' claims 1, 9, and 11.

The Examiner alleges that element 26 or 98 represents a "second semiconductor chip." (*Office Action*, p. 5, ¶ 6, line 8). However, Applicants respectfully submit that inductor 26/low-loss substrate 98 is not a "second [or auxiliary] semiconductor chip...having a semiconductor substrate...having a plurality of passive elements integrated on said semiconductor substrate," as required by each of claims 1, 9, and 11. Instead, inductor 26/low-loss substrate 98 is a discrete inductor/substrate having a pair of ends and does not have a plurality of passive elements integrated on a semiconductor substrate. (See *Specification* at p. 4, ll. 6-17).

Accordingly, with regard to independent claims 1 and 9, *Rahim* fails to teach or suggest the claimed combination, including, *inter alia*:

a second semiconductor chip, provided on said wiring board, having a semiconductor substrate with a side facing a side of said semiconductor chip, having a plurality of passive elements integrated on said semiconductor substrate.

With respect to independent claim 11, *Rahim* fails to teach or suggest the claimed combination, including, *inter alia*:

an auxiliary semiconductor chip, provided on said wiring board, having a semiconductor substrate with a side facing a side of said semiconductor chip to be mounted, having a plurality of passive elements integrated on the semiconductor substrate.

Since *Rahim* fails to disclose each and every element of independent claims 1, 9, and 11, *Rahim* fails to anticipate independent claims 1, 9, and 11, and claims 2-8, 10, 12, and 14-16 that depend therefrom. Applicants therefore request that the rejection of claims 1-12 and 14-16 under 35 U.S.C. § 102(b) be withdrawn and claims 1-12 and 14-16 be allowed.

IV. CONCLUSION

Applicants request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-12 and 14-16 in condition for allowance. Applicants submit that the proposed amendments of claims 1-6, 8-12, and 14-16 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is patentable over the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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